

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015477**Date Inspected:** 06-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 11

This QA Inspector randomly observed the following work being performed in Bay 11:

SMAW tack welding of weld joint ESD1-TL5-2E/F-26B located on PCMK east tower, lift 5, internal stiffener. Welder was identified as 202343. QC was identified as ZPMC CWI Xu Le Feng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Xu Jie (QCA1), who was not a CWI. It appeared to this QA Inspector that the welding variables were not being recorded by QC1's assistant and did not comply with WPS-B-P-3213-TC-U5b. Multiple 160°C Tempilstik temperature indicator marks applied by this QA Inspector to the adjacent base material within approximately 40mm from the point of welding did not melt. East tower, lift 5, is designated as A709M, HPS 485W-T2. WPS-B-T-3213-TC-U5b requires the minimum preheat and interpass temperature to be 160°C for material thickness more than 60mm. This QA Inspector requested QCA1 to summon QC1 to the work site. After approximately 10 minutes, ZPMC CWI Liu Yang (QC2) arrived and explained that he was assigned to welding work being performed in Bay 10. QC2 also informed this QA Inspector that QC1 was not available. This QA Inspector informed QC2, QCA1, and ABF Representative Cui Zhenghua that this QA Inspector would generate an Incident Report concerning the issue of insufficient preheat temperature. After approximately 45 minutes at the work site, when this QA Inspector departed, QC1 had not come to the work site in Bay 11. See the photos below for additional information.

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Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

SMAW welding of run-off plates at the top of weld joint NSD1-TL5-3E/F-F-13A located on PCMK north tower, lift 5, internal stiffener. Welder was identified as 040518. QC was identified as ZPMC QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Li Peng Fei (QCA2), who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3213-TC-U5b. Also present at this location and appearing to monitor the welding operation was ABF Representative Cui Zhenghua.

OBG Trial Assembly Area

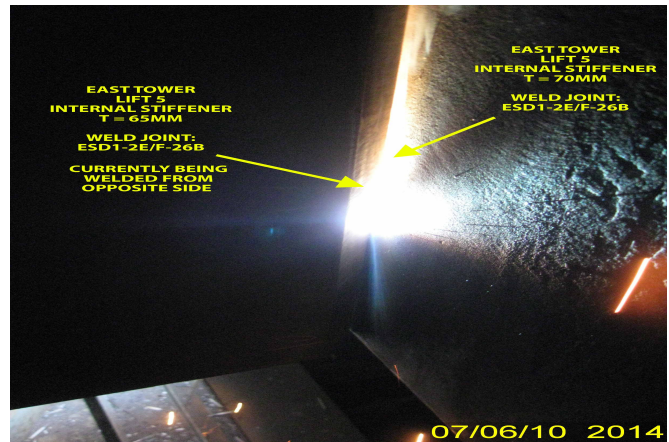
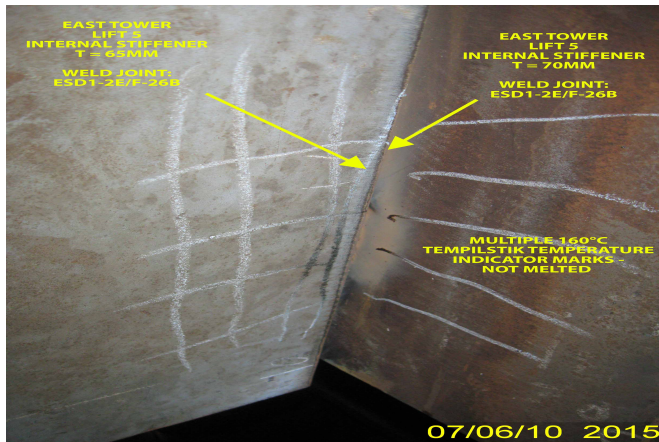
This QA Inspector randomly observed no welding related work in progress in the OBG Trial Assembly Area.

Heavy Dock

This QA Inspector randomly observed the following work being performed on the Heavy Dock:

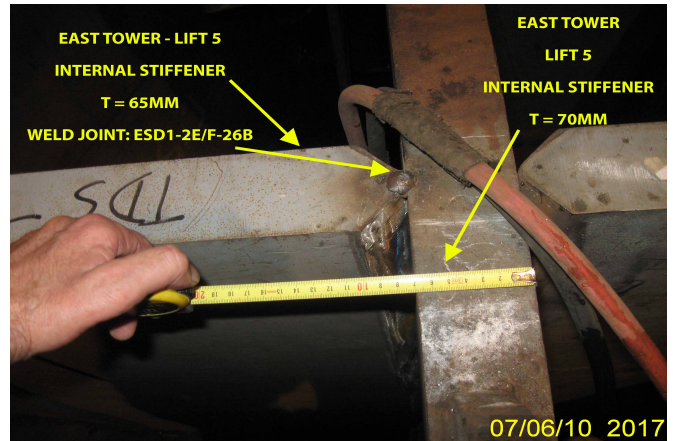
This QA Inspector observed, and ABF Representative Li Xiu Hua confirmed, no welding related work was being performed on the heavy dock. All 4 tower lifts 2 were erect with all 4 tower lifts 3 attached above, respectively. The lifts 2/3 worker access tower elevator was unmanned and dark. OBG crossbeam 7 was being placed on top of crossbeam 8 on the port side, amidships, on the deck of the ship moored to the foot of the Heavy Dock. OBG crossbeams 9 and 10 were sitting on stanchions on the foot of the dock. Approximately 20 ZPMC workers were performing various tasks on crossbeams 9 and 10, including bolting lifting lugs and external splice plates.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Dawson, Paul

QA Reviewer